PROJECT 200

A PERSONAL, INTERPERSONAL AND COMMUNITY-REINFORCEMENT PERSPECTIVE ON DEVIANT BEHAVIOUR (PIC-R)

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A Personal, Interpersonal and Community-Reinforcement Perspective on Deviant Behaviour (PIC-R)

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A comment by a former member of our lab:

"There was a crim theory named PIC-R
Which tried to explain how deviants tick-r
But with each turn of the page
Its critics sputtered with rage
As the prose kept getting thick-r and thick-r."

(W. Friesen, 1981)

EXECUTIVE SUMMARY

PIC-R is a broad social-learning perspective on human conduct. This perspective attempts to be both comprehensive and flexible. It considers factors which actively encourage as well as factors which actively discourage deviant activity. As well, it recognizes that these factors may be evident at the personal, interpersonal and community levels of analysis. PIC-R stresses that the specific factors governing the conduct of persons are many; they may be highly individualistic and their importance may vary over time and situations. PIC-R recognizes that an understanding of deviant behaviour must draw upon knowledge from life and the social sciences generally. The utility of PIC-R will reside in its ability to encourage comprehensive assessments and to assist in planning reasonable and effective interventions. This remains to be documented.

A. PIC-R draws upon the field of behaviour analysis for its most fundamental principles: the factors responsible for variations in human conduct are to be found in the immediate situation of action, specifically rewards and costs and those antecedents to action which signal the delivery of rewarding or costly consequences for specific acts. In brief, the immediate contingencies are responsible for the acquisition, maintenance and modification of human behaviours.

B. PIC-R draws upon the field of personality and the social sciences for an equally important set of principles: the immediate contingencies of action account for variations

in human conduct but various personal, interpersonal and community factors are responsible for the development, maintenance and modification of these critical contingencies. Some contingencies may be or become relatively automatic, given the nature of some acts (theft produces property; ingestion of a drug produces sensory change). Others are personally-mediated (self-management through self-instruction and self-reward) and still others are interpersonally-mediated (for example: other persons may explicitly approve or disapprove of one's actions). In addition, the political economy and social structure of broader social systems will produce and maintain certain contingencies, contingencies which may involve personal and/or interpersonal mediation.

C. Since many forms of deviant behaviour are multi-functional, PIC-R stresses the density of the rewards and the density of the costs. The chances of a deviant act occurring increase with the density of the rewards: the number, variety, quality and magnitude of rewards and the immediacy, frequency and regularity with which rewards are delivered. The chances of a deviant act occurring decrease with the density of the costs. The concept of "density" is important because it encourages a comprehensive assessment of current and potential rewards and costs rather than a fixation upon specific types of rewards or costs. The concept also leads to a set of PIC-R principles which suggest that the background density of rewards (or costs) is important in understanding the relative importance of any

specific reward (or cost). For example, adding one specific reward to the situation of action may have little effect on behaviour when the background density is very high or very low. However, that additional reward may have a great impact on behaviour when the background density is at some intermediate level.

D. The density of the rewards and the density of the costs in effect for nondeviant alternative behaviours are also important. When nondeviant alternative behaviours are highly rewarded, the motivation for many forms of deviance is greatly reduced. Moreover, when there are high levels of reward and satisfaction for nondeviant pursuits, the potential costs of deviance are great.

E. Comprehensive assessment involves reviews of the indicators of both the reward and the cost contingencies for both deviant and nondeviant behaviours. Such indicators include:

   a) behavioural history;

   b) personal attitudes, values and beliefs;

   c) personal skills and competencies;

   d) social supports, including access to resources and affective ties to others who may take pro or antideviant positions.

F. Within the ethical and socio-political context of any agency, effective interventions are those which produce and maintain

changes in the contingencies of action. For reduced chances of deviant conduct:

	Deviant	Nondeviant
Rewards	Reduce	Increase
Density of Costs	Increase	Reduce

G. The value of any perspective is a function of ethical and humane applications.

INTRODUCTION

The basic task of a perspective on deviant behaviour is to enhance our understanding of deviant behaviour. This understanding refers to the documented ability, or potential, to predict the occurrences of deviant acts and the ability, or potential, to influence the chances of deviant acts occurring. Agents of the human and social services, as well as individuals in trouble or troubled, will have a number of other concerns regarding deviant behaviour. However, developing understanding at the levels of predicting and influencing events is one of the major ways in which the social and behavioural sciences can contribute to organizational and personal efficacy.

The personal, interpersonal, and community-reinforcement perspective on deviant behaviour (PIC-R) is a variant of the general social-learning perspective (Adams, 1973; Akers, 1977; Bandura, 1969; Jessor & Jessor, 1977) which is intended to serve several special functions. By phrasing the principles in terms of variations in the chances of occurrence of deviant acts, PIC-R highlights the major criteria for understanding noted above. This should assist in the design of predictive studies and in the design of prevention and correctional programs. Second, PIC-R permits a ready classification of the classical but narrower perspectives on deviance such as the various versions of the motivational and control theories. It is widely recognized that the existing perspectives on deviant behaviour are not so much wrong as incomplete. Third, PIC-R stresses the inter-disciplinary nature of the analysis of deviant behaviour. There are indications that the public, correctional and mental health practitioners and social scientists themselves have grown weary of inter-

disciplinary squabbles for attention, recognition and power. PIC-R suggests an approach which will allow linkages to be made among the bio-physical, psychological, socio-cultural and political-economic levels of analysis. Those PIC-R principles which are at the individual level of analysis should apply within any political, economic and social system. Fourth, PIC-R suggests certain principles whose empirical exploration should serve to produce new facts regarding deviant behaviour. It is important that a perspective provide a convenient summary of existing facts, however, its true value lies in the ability of a perspective to contribute to the development of further knowledge. Evident throughout this paper is an appreciation for how little is actually known about important human and social problems in their totality. However, there is also a sense that our level of understanding is not fixed at such a low level that the pursuit of social and individual goals cannot be vigorous as well as prudent.

The main body of this report is divided into two sections: a statement of the general principles with some commentary and an expansion of the implications of PIC-R for prediction and control. A list of the principles is appended.

THE GENERAL PRINCIPLES

Introductory Principles

1. Occurrences of deviant and nondeviant behaviour are under antecedent and consequent control.

2. Inter- and intra-individual variations in the probability of occurrence of a given class of behaviour (deviant or nondeviant) are due to variations in the signalled rewards and costs for that class of behaviour.

Principle One states that deviant behaviour will be viewed as an "operant" or, synonymously, as an "instrumental response". "Operants" or "instrumental responses" are so called because they are behaviours which operate upon the environment or which are instrumental in bringing about changes in the environment. An operant is a behaviour which produces changes in the environment and the changes it produces (its consequences) may influence the chances of that behaviour recurring. By definition, operants are under consequent stimulus control. "Consequent stimulus control" is also called "outcome stimulus control".

Principle Two, a simple extension of Principle One, identifies two major types of outcome stimulus control. Consequent stimuli which increase the chances of an act recurring are called "reinforcers" or "rewards". Consequent stimuli which decrease the chances of an act recurring, are called "punishers" or "costs". Consequent stimuli which do not influence the chances of an act recurring are called "neutral stimuli".

Note that functional definitions of "rewards" and "costs" are employed. A rewarding event is one which, when it follows some act, results in an increased chance of that act recurring. A costly event is one which, when it follows some act, results in a decreased chance of that act recurring. The beauty of functional definitions is their flexibility. There is no suggestion that any given event must function as a reward (or as a cost) for all individuals or even for a given individual over time and situations. At the same time it is likely that some events will have similar controlling properties for different individuals because of a shared genetic pool and similar environments or learning histories. Thus, at the level of core definitions, the behavioural approach recognizes the rich variety in human experience and human values while retaining the idea that general principles may be useful.

In nontechnical language, the concept of consequent stimulus control suggests that we engage in behaviours which bring about pleasant events and avoid behaviours which produce unpleasant events. However, what is pleasant and unpleasant may be highly variable from individual-to-individual and over time and situations for any given individual.

Principles One and Two also refer to antecedent control. Antecedent stimuli, the stimulus conditions prior to an act occurring, may influence the chances of an act occurring. For example, the chances of one crossing a street increase in the presence of a green light and decrease in the presence of a red light. Add a policeman to that environment and the changes in the probabilities will be even greater. The behaviours of other persons are important antecedent stimuli: the principles of modeling or observational learning suggest that the chances of an act occurring increase when that act is demon-

strated by another person. Antecedent conditions also include the presence or absence of resources or aids necessary for the completion of an act: the chances of an assault with a deadly weapon occurring vary with the availability of deadly weapons. The availability of necessary resources signal that the act may be completed successfully (that is, it will be rewarded). Discriminative stimuli are a very important subset of antecedent stimuli. Discriminative stimuli are stimuli which were present when an act was previously rewarded or punished. Such stimuli set the occasion for a rewarded or costly response. They signal that a response will be followed by some consequence and thereby influence the chances of that response occurring. We may expect, for example, that probationers are more likely to present verbal arguments in favour of crime in the presence of their delinquent friends than they are in the presence of their probation officers.

Principle Two introduces a shorthand phrase to describe antecedent and consequent control: "variations in the signalled rewards and costs" for a given type of behaviour. By reference to "signalled rewards and costs" henceforth we will be drawing attention to two key operations available for influencing behaviour without having to spell them out. They are: one, arranging consequences; and two, arranging antecedents so that the occasion for a rewarded or costly response is established.

We deliberately chose the word "signalled" rather than "perceived". An "active", "conscious", "thinking" and "perceptive" individual will be assumed but with the present level of knowledge it would seem very inappropriate to assume that all determinants of behaviour are cognitively mediated in that "active", "conscious" sense. People have more information about the

relationships which exist among events in their worlds than they can or care to consciously express through language or on our standardized rating scales for "expectancies".

In addition to introducing some very basic behavioural concepts and accompanying operations, Principles One and Two also highlight some general theoretical issues. First, note that Principle Two is phrased in terms directly related to the major task of any perspective on deviant behaviour, that is, to account for the variations observed in deviant conduct among individuals (inter-individual variations) and over time and situations for any given individual (intra-individual variations). Secondly, attention is focused on deviant acts rather than deviant persons or identities. Unlike Sutherland and Cressey (1970) or Matza (1964), we do not talk of persons becoming "criminal", "deviant" or "reformed" but rather of the conditions under which the probability of occurrence of deviant acts is increased or decreased. Thirdly, like most of the current social-learning perspectives, PIC-R views deviant behaviour as normal behaviour in the special sense that deviant and nondeviant behaviours are considered to be equally under antecedent and outcome control.

None of this suggests that it is impossible to identify reliable differences between persons who engage in deviant activity at relatively high rates and those whose deviant acts are less frequent. Those measures of attributes of persons and their situations which relate to the frequency of deviant activity are measures which function as indicators of the signalled rewards and costs for deviant activity. Here, PIC-R differs considerably from labelling perspectives such as Schur's (1973). Schur (1973) suggested there are no

important differences in the personal and social attributes of offenders and nonoffenders except that the offenders have been officially processed. While disregarding a large amount of research data suggesting the contrary, Schur may at least be said to be emphasizing the fact that the official labelling or processing of "deviants" may alter antecedents and consequences and hence may alter the frequency of occurrence of deviant activity.

A final theoretical issue raised by the first two principles is that of choice of language system. The terms "antecedent control" and "consequent control" were chosen because they suggest environmental operations, interventions or things that can be done in order to alter the rate of occurrence of given behaviours. A somewhat more humanistic phrasing of "consequent control" is to say that behaviour is <u>functional</u>: that is, behaviour is maintained by the functions it serves for the individual, or by the needs it satisfies, or the goals it achieves, or the values it affirms. Such an alternative phrasing may be very helpful when it comes to constructing measures of "rewards and costs". For example, it is useful to ask people what they value and what they hope to achieve when what we want to do is predict deviant behaviour. However, gaining actual control over antecedents and consequences will be more helpful, if we wish to participate in altering the chances of deviant (or nondeviant) behaviour occurring.

3. <u>Antecedents and consequences are of two major types: additive events (stimuli are introduced, extended or augmented) and subtractive events (stimuli are withdrawn, postponed or diminished)</u>.

Principle Three is introduced in order to draw attention to two major

stimulus operations available for altering behavioural occurrences. Additive events are often called positive (+) events and subtractive events are often called negative (-) events. We will employ the terms "additive" and "subtractive" in order to avoid the connotations of "positive" (with "pleasant") and "negative" (with "unpleasant"). Additions to the environment may be "pleasant" or "unpleasant" as may be subtractions from the environment. As later discussions will show, the additive - subtractive distinction has considerable analytic value.

4. The controlling properties of antecedents and consequences are acquired through the interaction of the person with the environment. The principles governing the acquisition, maintenance and modification of the controlling properties of stimulus conditions include those of genetic and constitutional disposition and capability; biophysical functioning; cognitive functioning; human development; behavioural repertoire; state conditions; and respondent and operant conditioning including observational learning, rule learning, symbolic control and role enactment.

Principle Four places the analysis of deviant behaviour firmly within the mainstream of the biological, behavioural and social sciences. It is, and quite deliberately so, a "catch-all" principle, intended to underscore the inter-disciplinary nature of the study of deviance while recognizing that our level of understanding of deviant behaviour is limited by the level of knowledge in social and life sciences generally. The classification of the principles governing how stimuli acquire the ability to control behaviour is obviously not exhaustive nor are the classes of principles mutually exclusive.

Principle Four says that we must be open to knowledge from a variety of sources and that the concepts of antecedent and outcome stimuli provide a means of integrating the knowledge in the study of deviant behaviour.

The biophysical, cognitive, developmental and other factors influence behaviour through some combination of variations in response capability, variations in sensitivity to particular classes of stimuli, and differentials in the fundamental abilities to learn and to process information. When a response cannot be emitted because of biophysical or other types of incapacitation, then variations in signalled rewards and costs are not going to increase the probability of that response above zero. When persons are insensitive to certain classes of stimuli because of biophysical or other limits on information reception and processing, alterations in those stimuli as either antecedents or consequences are not going to influence the probability of a given response.

Genetics. The evidence for a genetic-criminality link continues to grow (Mednick & Hutching, 1978) although questions regarding the magnitude and mechanisms of the effect are very active research topics (Eysenck & Eysenck, 1978; Cloninger et al., 1978). In addition to the twin and adoption studies, there is evidence that a variety of personality factors with apparent genetic links also relate to criminality: for example, intelligence (Hirschi & Hindelang, 1977), autonomic lability and other indices of bodily functioning (Hare & Schalling, (1978), and extroversion and neuroticism (Eysenck, 1977). This brief note on genetic factors should not be interpreted as suggesting that all genetic-deviance links are as controversial as the genetic-criminality link (see, for example, standard textbook discussions of Huntington's Chorea or

Down's Syndrome).

Constitutional factors and biophysical functioning: Permanent alterations in the biophysical system such as those associated with brain trauma, nutritional deficiencies, and endocrinological dysfunctions do have very dramatic and possibly chronic effects on behaviour. Acute variations in biophysical functioning may also influence behaviour by way of variations in the controlling properties of stimulus events and response capabilities. Loss of coordination associated with alcohol consumption is an obvious example.

Human development: In so far as general principles of human development suggest age-related variations in response capability and sensitivity to different classes of stimuli, such principles may be helpful in the analysis of deviant behaviour. An example of special interest in the study of delinquency is the developmental approach to the study of egocentrism (Chandler, 1973). Age-related variations in sensitivity to wishes, feelings and knowledge of others suggest age-related variations in those forms of deviance subject to interpersonal control.

Cognitive Functioning: Biophysical factors may place limits on information reception, processing and emission (Ullmann & Krasner, 1975). Even within the normal limits of biophysical functioning, there is the general problem of accounting for how information is interpreted and acted upon in the phenomenological sense. For example, while some principles of PIC-R have to do with how current sentiments influence future behaviour, there is, for purposes of understanding the acquisition of sentiments, the question of how past behaviour may influence present attitudes. Thus, perspectives such as

cognitive dissonance (Aronson, 1976) may be useful in understanding how cognitions mediate external stimuli (Bandura, 1977).

Behavioural repertoire: The notion of hierarchies (Catania, 1979) is perhaps the most basic idea in the behavioural literature. A person's behaviours may be observed, classified and ordered as to their relative frequency of occurrence in specified situations. The construction of such a list allows predictions about the probability of behaviours recurring. Behaviours which have not been observed at all have zero probability of occurrence. However, a change in the probability of one behaviour in the hierarchy will have effects on the probability of recurrence of other behaviours— even influence the emergence of behaviours outside the repertoire. Nonetheless, an analysis of hierarchies is an incomplete analysis in that the importance of stimulus events has been ignored.

State conditions: While the importance of the state of the organism has been implied by all of the above, the principles of "satiation" and "deprivation" are of sufficient importance to warrant special mention. The controlling properties of stimulus events may vary with recent histories of the degree and quality of exposure to those events. Generally, the rewarding value of stimuli increase with lack of exposure (deprivation) and decrease with exposure (satiation).

Controlling Stimuli: Their Sources and Multiplicity

Antecedents and consequences arise from four major sources: the actor (personally-mediated events); other persons (interpersonally-mediated events);

the act itself (non-mediated, or automatic and habitual events); and other aspects of the situation of action.

The classification of sources of controlling events employed in Principle Five is less elegant than others more frequently found in the literature: for example, internal-external, intrinsic-extrinsic, or personal-social. While less than elegant, the classification does serve certain important functions. One, it directs attention to the possibility of different levels of intervention in attempts to alter consequences; that is, some or all of the personally, interpersonally, and non-mediated events may be altered. Similarly, it suggests that for descriptive studies we should consider including indicators of each of the different sources of outcome events. Thirdly, as will be developed later, the multiple classification of sources (Principle Five) and types of outcome events (Principles Two and Three) will serve to order the major but narrower perspectives on deviance now apparent in the textbooks. The sources of controlling events will be discussed with an emphasis on consequent control because of the stress placed upon "signalled outcomes".

"Personally-mediated events" are ones typically described as "conscious", "deliberate" or "purposive" actions on the part of the person. The personally-mediated events include self-instructions (to proceed, cease or change), self-reward, self-punishment, and other self-alterations of the situation (including moving to a different situation). Generally, the personally-mediated events are dependent upon a comparison of one's planned or ongoing behaviour, with a standard of conduct or performance. This involves self-monitoring of behaviour and self-evaluation with reference to the standard. The standards of conduct may be implied by one's personal sentiments (attitudes, values

and beliefs), by external cues and likely reflect past successes and failures in similar situations. Self-instruction and self-reward depend upon the results of the self-evaluation, (i.e., upon the match found between one's behaviour and the standard). The whole process is called behavioural self-management: setting standards of conduct, self-monitoring, self-evaluation, and self-instruction and consequation. The most comprehensive statement on self-regulation is that by Carver & Scheier (1981).

"Interpersonally-mediated events" are the evaluative behaviours and reactions of others present in the immediate situation of action. Normally, the verbal, gestural, and motor expressions of approval and disapproval by others, as well as the opportunity (or lost opportunity) to engage in other co-operative interpersonal behaviours constitute the controlling events. Note that for interpersonally-mediated events, the other person(s) must be present. Symbolic interactions and anticipation of the reactions of nonpresent others, are examples of personally-mediated control.

The "automatic and habitual outcome events" are nonmediated in the sense that the person is not engaging in deliberate self-management and the consequences are not dependent upon the evaluative reactions of others. The automatic outcomes are relatively reliable and immediate outcomes which occur given that an act of a specific type has been carried out. For example, an act has relatively automatic consequences in the form of proprioceptive feedback. Some acts, such as food or drug consumption, may have automatic sensory and affective consequences. Some automatic outcomes, habitual ones, may depend upon a history of rewarded and/or costly behaviour and given that history, the outcomes occur. Through the process of respondent or classical

conditioning[1], stimulus feedback from given acts may come to control conditioned emotional responses which function as consequent stimuli. In the area of drug use, the establishment of physical dependence ensures that the injection of the drug will have the effect of escaping or avoiding withdrawal distress. Completing various forms of theft and sexual and aggressive acts may automatically bring about money and property, reduced arousal, heightened excitement or the removal of an obstacle. In such situations of action, personally and interpersonally-mediated events need not exercise high levels of control.

Other aspects of the situation may function as controlling events but many such aspects may be seen as special instances of automatic or personal control. For example, the perception of a police car in the vicinity, of an alarm system in a store, or noting that the bar is about to close will influence behaviour by interacting with and/or contributing to the process of self-management.

6. Variations in the probability of occurrence of a given class of behaviour are a positive function of the signalled density of the rewards for that class of behaviour and a negative function of the signalled density of the costs for that class of behaviour.

"Density" refers to the number, variety, magnitude and quality of outcome events as well as the frequency, regularity and immediacy with which they occur. A relatively high density of rewards indicates that a variety of high quality rewards are produced with some regularity and immediacy. When a variety of outcome events are being signalled, the temporary effects of deprivation or satiation with reference to any given class of outcome events is not likely to

have profound effects on the probability of a given behaviour occurring.

Principle Six, departs from behavioural perspectives as they are represented in current textbooks. While the concept of "density" is found in the behavioural textbooks, the laboratory studies have been concerned with only one or two responses and one or two antecedent and/or consequent stimuli. Little is known about multiple schedules and multiple rewards and costs. Given the multi-functional nature of deviance, a social-learning perspective must move beyond the laboratory data.

Principle Six, when combined with Principles Three and Five, suggests that single factor studies or theories are bound to account for only small proportions of the variance in multi-functional deviant acts. However, a comprehensive survey of the automatic, personal and interpersonal rewards and costs promises to increase understanding considerably. It is apparent that the narrower perspectives on deviance have chosen to focus on one type of event rather than another (for example, on rewards rather than costs) or one source of controlling events (for example, the person rather than significant others). Similarly, some focus on additive events while others concentrate on subtractive events.

Table 1 is a summary of the first six principles as applied to the types and sources of outcome events for deviant behaviour. The table provides only a sample of possible outcome events and draws upon examples from the analysis of criminal behaviour and drug use and abuse. However, it should illustrate that many forms of deviant behaviour are multi-functional. A deviant act may be maintained by a variety of outcomes and these controlling events may vary from individual-to-individual and over the career and situa-

Table 1

A Cross-Classification of Type and Sources of Consequences

Sources of Consequences or Antecedents	Type of Consequence: Rewards		Costs	
	Additive	Subtractive	Additive	Subtractive
(Some typical descriptions of any concomitant emotional states.)	("Pleasure")	("Relief")	("Pain")	("Frustration"/ "Disappointment"/ "Grief")
A. Personal: Self-Mediated				
i) Events: (Thoughts, images, self-talk, anticipation of the reactions of others.)	Positive self-labelling. Personal approval. Self-instructions to proceed.	Self-removal of negative labels. Avoiding or discounting negative labels.	Negative self-labelling. Personal disapproval. Self-instructions to cease.	Self-removal of positive labels. Recognition of potential losses.
ii) Examples: (An "active", "conscious", "deliberate", "self-managing" person is assumed.)	"This is great". "This is fun." "What a stone!" "I am at one with the universe." "I am free, independent, powerful." "That was one of the cleanest B & E's I have ever accomplished." "Wait until I tell Joe about this."	"I am not a wimp/coward." "This is relaxing." "This is exciting, it was so boring before." "Finally, some energy." "The drug laws are stupid anyway." "The COP deserves it."	"I feel sick" "This is wrong, in my eyes, in the eyes of my mother, in the eyes of God." "This guy might fight back."	"Am I the type of person who would steal/ hurt other people/ leave my kids out in the rain while I buy a pack of cigarettes?" "If my mother saw this...." " I am losing control."

Some general psychological perspectives on self-regulation: Bandura; Meichenbaum Kanfer, Mahoney; Carver & Scheier.

Glaser Differential Identification

Lindesmith; Sykes and Matza

Reckless; Hirschi; Pilliavin; Freud

Subcultural and Labelling theorists with an emphasis on symbolic interaction

Control theorists with an emphasis on symbolic interaction

Differential Association Theory: with an emphasis on symbolic interaction

Table 1 (Cont'd)

	Rewards		Costs	
	Additive	Subtractive	Additive	Subtractive
C. Automatic: Non-Mediated				
i) Sensory/physiological effects and affective stimulation.	"Pleasure" The "stone", "rush", "high", "buzz". Arousal joy. Eysenck	"Relief": from boredom; Quay frustration; Anomie; Frustration Aggression anxiety/tension/guilt; Stress-reduction theories withdrawal distress; Lindesmith from a dry, scratchy throat.	"Pain" Nausea [Some interventions such as negative practice and "rapid smoking" exacerbate the naturally aversive consequences of specific behaviours.]	"Frustration" Loss of physical co-ordination. Removal of pleasant affective or sensory states. Hunt & Azrin
ii) Conditioned emotional responses.	"Hope" The behavioural versions of Lindesmith	"Relief"	"Fear" Eysenck; Hare; Lykun, Schachter & Latane	"Frustration"
iii) External Events tied in an intimate manner to specific types of acts such as theft and aggression.	Money, property. Sexual satisfaction. Signs of pain/submission.	Removal or destruction of a frustrating agent.	The possibility of retaliation; signs of conquest by another.	Interference with ongoing activities. Hunt & Azrin Loss of money (gambling.

Table 1 (Cont'd)

	Rewards		Costs	
	Additive	Subtractive	Additive	Subtractive
B. Interpersonally-Mediated				
Events:				
i) Direct evaluation of expressions of others.	Approval, affection, attention.	Reduction of disapproval.	Disapproval	Reduction of approval, attention.
ii) Behavioural opportunities involving other persons.	Opportunity to engage in "valued" activities. The approval of others and group membership brings the opportunity for a variety of social, recreational and sexual activities.	Opportunity to escape/avoid "disliked" activities (such as work and authority; family responsibility; or being alone, bored, generally frustrated). Opportunity to engage in otherwise very costly behaviours (in the sense that intoxication may reduce the costs of aggressive/sexual displays.	Forced to engage in disliked activities (for example: having to listen to the same old stories told by drinking buddies; having to interact with disliked others.	Lost opportunity to engage in "valued" activities. Reduced approval, affection and attention.

Some relevant general social-psychological perspectives on interpersonal influence: group dynamics theory; social learning theory, the relationship and contingency dimensions.

Subcultural and labelling theorists, with an emphasis on the interpersonal contingencies.

Matza ("Sounding")

Control theorists, with an emphasis on the interpersonal contingencies.

Reckless; Hirschi; Piliavin, Hunt and Azrin

tions of any given individual.

Note how the major social-psychological theories of deviance distribute themselves across the Table. The motivational theories tend to fall in the first two columns (the rewards) while the control theories fall in the last two columns (the costs). Motivational theorists emphasize the potential rewards for deviant behaviour while the control theorists emphasize the potential costs or the factors which deter deviance.

Within the motivational set, Merton's (1968) anomie version emphasized the material rewards of money and property with some additional reference to enhanced power and prestige. While such outcomes may function as additive rewards, there is the distinct sense in Merton's writings that such events also serve as subtractive rewards, that is, function to produce relief from a sense of frustration and alienation. The classic psychoanalytic as well as frustration-aggression theories (Dollard et al., 1939; Berkowitz, 1962) also suggest that crime may serve an escape/avoidance function as does the stress-reduction model of alcoholism (Sobell & Sobell, 1972) and Lindesmith's (1947) perspective on heroin addiction. Some valued end-states may be more readily brought about by deviant rather than nondeviant acts: for example, excitement and thrills (Miller, 1958; Quay, 1965); independence (Jessor et al., 1973); Miller, 1958); a demonstration of one's contempt for the existing social order or an affirmation of one's commitment to a new order (the conflict theorists). Depending upon the deviant versus nondeviant orientation of one's self and one's friends, deviant activity may also bring about the approval of one's self and one's friends. Subcultural and labelling theorists emphasize such personal values and social norms although they tend to be very quiet regarding the process by which norms guide behaviour. In contrast, PIC-R

suggests the 'processes', and that control will be evident at both the personal and interpersonal levels. As suggested by Burgess & Akers (1966), Sykes & Matza's (1957) techniques of neutralization (or rationalizations for deviance) constitute verbalizations which serve to avoid, escape or deflect negative labelling by one's self or by others. PIC-R incorporates the general rewards suggested by the narrower motivational theories of deviance but does not negate the possibility that for some individuals, under some circumstances, the motives for deviant behaviour can be highly idiosyncratic (the signs of pain in others as in the case of sadism; sexual attraction for children as in the case of pediphilia).

Control theorists emphasize the costs of deviance but differ among themselves in terms of the types of costs emphasized. Eysenck (1977) emphasized deficits in fear conditionability. Some researchers have found specific correlates of psychopathy at the autonomic level (Hare & Schalling, 1978). Others emphasize ties to conventional moral codes and affective ties to conventional others (Hirschi, 1969; Piliavin et al., 1968; Reckless et al., 1972), as well as generalized sensitivity (or insensitivity) to the wishes, feelings and expectations of others (Chandler, 1973; Hogan, 1969). When one is strongly tied to convention then, deviant activity occurs at the risk of personal and interpersonal disapproval plus the loss of affection and esteem.

Differential association theory (Sutherland & Cressey, 1970), one of the more conceptually and empirically satisfying of the general perspectives (Andrews, 1980; Johnson, 1979), appears sensitive to both rewards and costs. However, the original statement of differential association placed an over-emphasis on the symbolic (or personal) level of control. The available empirical literature, with the

intriguing exception of Kohn & Annis (1973), suggests that peer support and personal sentiment measures make independent contributions to the predictability of indices of deviant behaviour (Andrews & Wormith, 1981; Johnson, 1979; Jensen, 1972; Andrews & Kandel, 1979). In brief, deviant associates increase the chances of deviant activity above and beyond the influence they have on one's personal beliefs regarding deviance. Social support involves interpersonally-mediated approval as well as an increased resource supply such as access to a "fence" or to drugs.

The personality correlates of criminality may also be located within Table 1. When high value is placed upon excitement and thrill-seeking and upon independence, then the probability of exploring crime increases. Some valued consequences are simply more readily achieved through deviance. Measures of psychic discomfort (such as anxiety, low self-esteem, alienation) may be related to criminality in at least two ways: one, certain forms of deviance may reduce psychic distress (a subtractive reward); two, with a background of low levels of self-satisfaction, the subtractive costs of deviance are going to be relatively low. A deficit in self-control suggests an impulsivity quite compatible with stumbling into trouble as well as a reduced chance that pro-social sentiments would guide behaviour through self-management. Personal tolerance for deviance increases the chances of self-rewards for deviance and reduces the chances of self-punishment for deviance. Egocentrism, or lack of empathy, suggests a reduction in the controlling potential of the anticipated or actual reactions of others to one's deviant acts. Measures of psychopathy are likely a complex function of self-control deficits, egocentrism, and generalized tolerance for deviance. Low scores on measures of social power

and personal competence suggest that the person is unlikely to be in receipt of many rewards for nondeviant pursuits and, hence, the subtractive costs of deviance are slight and the motivation for crime is strong.

The implications of PIC-R for predictive studies and the design of intervention programs will be developed later but a few additional points should be noted here, particularly with reference to personality variables. Note the joint importance of the density of rewards and costs and the rules by which rewards and costs are delivered. The operation of personally-mediated controls assumes a person with skills to self-manage as well as a set of standards of conduct. The application of self-management skills may promote or discourage deviant behaviour depending upon whether the standards are pro- or antideviant. Self-esteem is one product of self-evaluation and it is likely that the relationship between self-esteem and deviant conduct is itself dependent upon whether one personally approves or disapproves of deviance. More generally, measures of personal distress and personal deficits and competencies will be particularly relevant to deviance among persons who lack personal and social supports for deviance. In a sense, when the personal and social supports for crime are weak, one's person or situation needs to be a trifle "unusual" or "crazy" for one to get into crime. When the personal and social supports for crime are strong, one needs only be a "crook" or a "revolutionary". The person and situations of some "crooks" may be "crazy" but the craziness of crooks does not necessarily relate in strong ways to their criminality. Addie (1980) recently took an advance look at the personality-criminality links emerging from an ongoing study (Andrews & Kiessling, In progress) and found, as one example, that neuroticism among male probationers was

positively associated with criminality when ties to crime were weak but unrelated to criminality when ties to crime were strong.

Magnitude of Effects

The preceding principles have reviewed some basic concepts and operations, and have suggested the nature and sources of some fundamental controlling factors. The next set of principles focus not simply on the direction of effects (increasing or decreasing the chances of deviant behaviour) but on the magnitude of effects (on how much of an increase or decrease is observed). Anyone who observes their own behaviour and the behaviour of others knows that the magnitude of the impact of any event often depends upon a host of other factors. In statistical terms we talk of interactions: the effect of Factor A depends upon Factor B. A $1,000.00 bonus delivered to a person earning $12,000.00 a year is probably more highly valued than a $1,000.00 bonus given to a person earning $50,000.00 per year. To our knowledge the following principles have no equivalent in the laboratory literature but, with the introduction of the concept of "density", such principles appear necessary. Should the principles receive systematic empirical support they will be of some practical significance in prediction and intervention.

7. The magnitude of the effect of any one signalled reward, for any class of behaviours, depends upon the signalled density of other rewards for that class of behaviours. Generally, the magnitude of the effect of any one reward is greatest at some intermediate level of density, and the magnitude of the effect of any one reward is diminished at the lowest and highest levels of density. Similarly, the magnitude of the effect of any one cost for any class of

behaviours is greatest at some intermediate level of density of costs.

Consider the following: prior to the initiation of cigarette smoking, the automatic rewards are not established (the sensory changes, the pleasure derived from watching the smoke swirl about in the air and, ultimmately, the avoidance of the discomfort of withdrawal). Under such low density of reward conditions, neither the possibility of approval from one's friends nor the possibility of positive self-definition ("I'm a real man") are likely to have dramatic impact on the chances of one taking up cigarette smoking. However, with the possibility of both interpersonal approval and positive self-labelling, the chances of taking up smoking may increase greatly. But what about the situation of a regular smoker? — the automatic rewards are likely firmly established and there is a relatively high density of rewards for smoking. Under such circumstances finding a new reason to feel good about one's smoking is unlikely to have much impact on the frequency of cigarette smoking.

The following figures provide a more general representation of Principle Seven for both rewards and costs. In a sense Principle Seven states that there is a "threshold" effect and a "ceiling" or "over-determined" effect. When some critical level of density of rewards is reached, behaviour really takes off. Above some level of density there is so much support for that behaviour that the ceiling has been approached and adding (or subtracting) one reward makes very little difference. When a variety of high quality rewards are being delivered regularly, one reward is not likely to be missed if withdrawn. Single-focus intervention programs are doomed to failure with that proportion of clients whose deviant behaviour is "over determined" but have

Figure 1

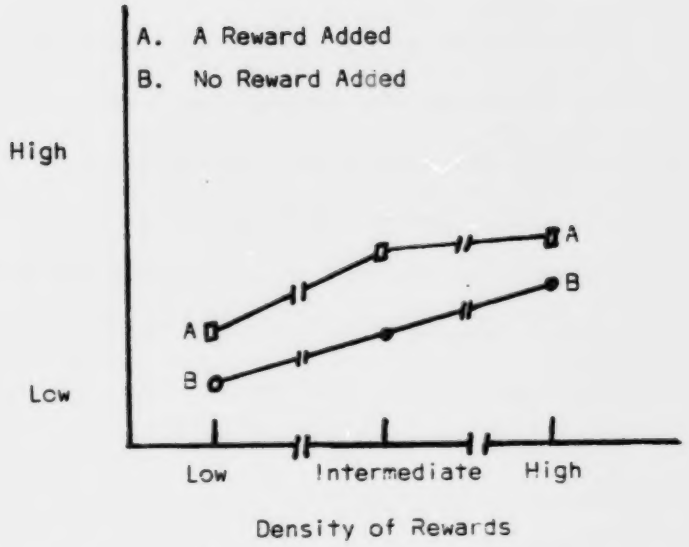
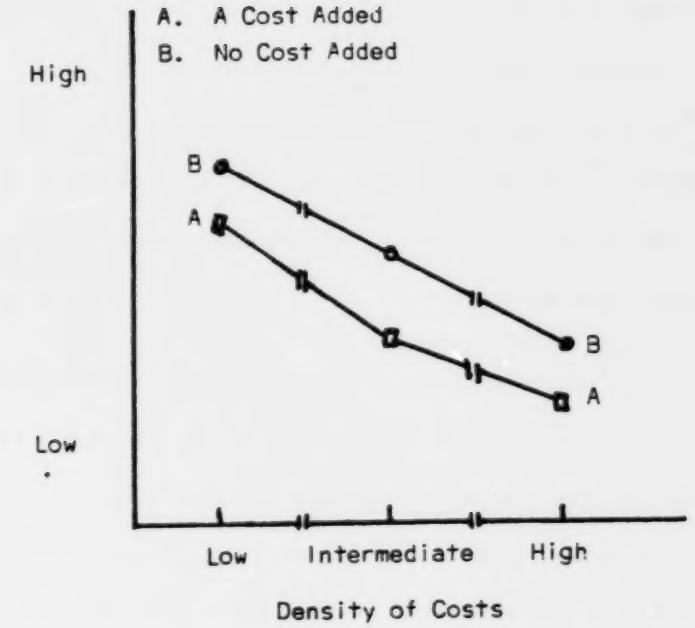


Figure 2



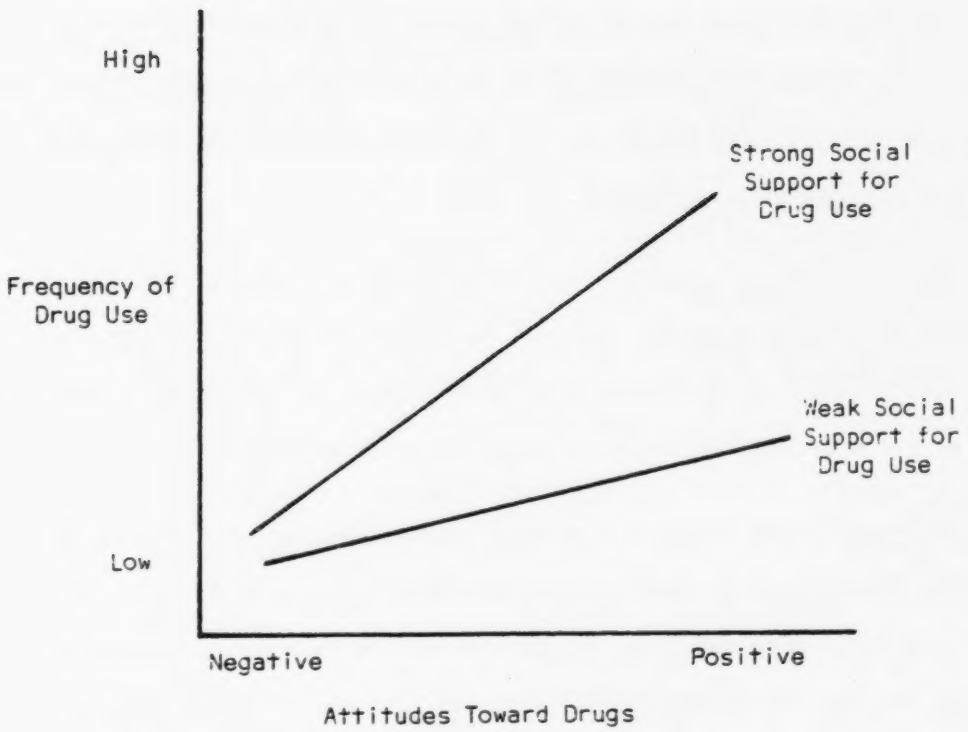
great potential for clients whose deviant acts are not under multiple schedules of reward.

Consideration of the effects of the formal legal costs of crime is interesting. Very likely, increasing the immediacy and regularity with which criminal penalties are imposed, and seen to be imposed, would result in some reduction in criminal behaviour. However, consider the effects of capital punishment (as a signalled cost) on the rate of universally condemned acts such as murder. The personal, interpersonal and other costs associated with murder are very high, that is, very dense. Thus the (re)introduction of capital punishment would have little impact on murder rates. However, for illustrative as opposed to policy purposes, the rates of illegal parking would drop dramatically if capital punishment was introduced as a (signalled) cost.

Principle Seven accounts for the sometime nature of the finding of Attitude-by-Social Support interactions on frequency of drug use. Sometimes positive attitudes toward drugs tend to be more strongly associated with drug use when one's friends use drugs than when one's friends are not drug users. Equally important, the effects of social support are sometimes greatest when attitudes toward drugs are positive.

The next figure is a hypothetical representation of the sometime finding of an Attitude-by-Social Support interaction. The increases in drug use found with increases in positive attitudes are greater under strong social support conditions, than under weak social support conditions. Similarly, the effects of social support increase with increasingly positive attitudes toward drugs.

Figure 3


High
Frequency of Drug Use
Low
Strong Social Support for Drug Use
Weak Social Support for Drug Use
Negative
Positive
Attitudes Toward Drugs

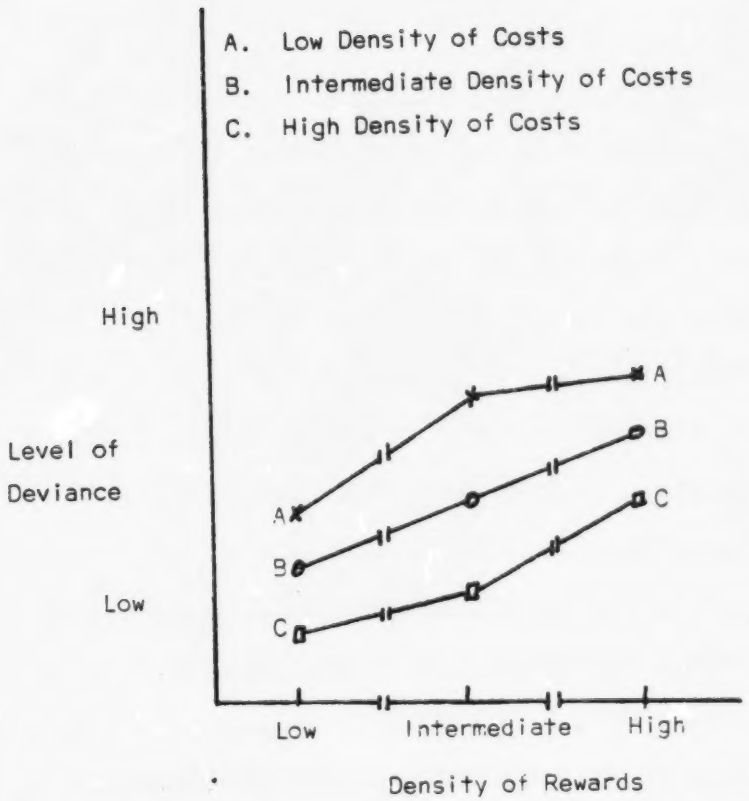
Principle Seven suggests that the interaction should disappear when there are additional rewards for drug use (for example, sensory-physical effects, avoidance of withdrawal distress, etc.). There is now some evidence (Andrews & Kandel, 1979) that the interaction is most evident among those who move from the nonuser-to-user category and less evident among regular users (those for whom the intrinsic rewards have been established).

8. The magnitude of the effect of the signalled density of the costs for any class of behaviours depends upon the signalled density of the rewards for that class of behaviours. Generally, the effect of density of costs is greatest at some intermediate level of density of rewards and diminished at the lower and higher levels of density of rewards.

Combining the language of the motivational and control theorists, when the motivation is very weak, it does not take much to deter. When the motivation is very strong, it is difficult to deter. However, disincentives may be crucial when the incentives are only moderate in strength.

The next figure provides a general representation of Principle Eight. A practical implication is that a rapid deceleration in deviant activity may be accomplished by both reducing the density of the rewards for crime and increasing the density of the costs for crime. In fact, if the density of the rewards remains high, then there are severe limits on the effectiveness of an increased density of costs. If the reward density is low, there is little behavioural advantage associated with the introduction of severe costs. When the costs are very high, just a slight reduction in signalled rewards will produce a dramatic reduction in behaviour.

Figure 4


A. Low Density of Costs
B. Intermediate Density of Costs
C. High Density of Costs
High
Level of
Deviance
Low
A
B
C
A
B
C
Low
Intermediate
High
Density of Rewards

Principle Nine will outline important links between the contingencies for deviant and nondeviant behaviour (the term "contingencies" refers to the fact that the delivery of rewards and costs is dependent upon the occurrence of deviant or nondeviant acts). Principle Eight suggested that the rewards and costs for deviance should be considered in combination. Principle Nine extends this to multiple consideration of the rewards and costs for deviant and nondeviant behaviour. Some specifics of Principle Nine are developed in a set of subprinciples and associated commentaries.

9. Variations in the signalled rewards and costs for one class of behaviour (deviant or nondeviant) may produce variations in the probability of occurrence of the other class of behaviours. The magnitude of the effect is a function of interconnecting contingencies and schedules for deviant and nondeviant behaviour. The rewards for nondeviant behaviour approach their maximum impact on the chances of deviant behaviour under the following conditions:
   a) when and where relatively noncostly and nondeviant behaviours produce a relatively high density of rewards, including rewards similar to those produced by deviant behaviour;
   b) when and where the costs for deviant behaviour include a reduction, postponement, omission or interuption in the delivery of those rewards produced by nondeviant behaviour; and,
   c) when and where nondeviant behaviours are incompatible with deviant behaviour.

Principle Nine has strong ethical and rhetorical appeal. Within the context of most human and social service agencies, it would be repugnant to

systematically reduce the rewards and increase the costs for deviant behaviour without as systematically opening up nondeviant and noncostly alternative routes to rewards. At a very practical level, any agency which focused exclusively upon reducing the rewards and increasing the costs for deviant behaviour would soon find itself dealing with clients who, when not attacking the agency, would be escaping from it.

Principle Nine "a", is based on three well-established laboratory phenomena. One, when rewarding alternatives are available, they are explored. Two, in a choice situation, that behaviour with the highest density of rewards and lowest density of costs is chosen. Three, punishment is most effective in reducing the frequency of a given act when alternative and non-punishing routes to the same rewards are provided. In brief, opening-up noncostly and nondeviant routes to rewards increases the effectiveness of the costs in effect for the deviant act. The following figure is a hypothetical representation of a typcial laboratory finding.

Principle Nine "a" made special reference to the delivery of rewards similar to those delivered by deviant behaviour. This is an important limiting condition. The typical correctional goal of enhancing the employment status of offenders may be most relevant for those whose crime is under the control of rewards normally delivered by employment. Getting a job may have more impact on the criminal acts of thieves than the criminal acts of pediphiles.

Principle Nine "b" recognizes some very special circumstances under which increasing the density of the rewards for nondeviant behaviours may

impact on deviant behaviour even when the rewards are dissimilar. According to Principle Nine "b", increasing the density of the rewards for nondeviant behaviour is a major way of increasing the costs for deviant behaviour. The principle is taken directly from the Hunt and Azrin (1973) community-reinforcement approach to alcoholism. A fundamental way in which the community controls deviance is by reducing or withholding the rewards normally delivered for nondeviant behaviour. This control through subtractive costs presupposes a background of dense rewards in the first place. In the words of the song "freedom is just another word for nothing left to lose".[2]

Principle Nine "c" draws attention to the compatibility of deviant and nondeviant pursuits. When behaviours which are incompatible with deviance are rewarded, then the probability of deviance decreases. Incompatibility may be evident in terms of the physical nature of the act, the location of the act, the orientation of co-participants, and the personal sentiments which accompany the acts. Being "on the job" is incompatible with being "on the streets", "attending church" is not "hanging out in a bar", and associating with school chums may not be associating with committed thieves.

Overall, Principle Nine suggests that measures which tap, and interventions which influence, the density of the rewards and satisfactions associated with nondeviant pursuits with nondeviant others in nondeviant settings will be associated with variations in the chances of deviant acts occurring. Motivational theorists recognized this when they conceptualized some forms of deviance as innovative, retreatist, escapist, relief-seeking or tension-reducing endeavours. Control theorists recognized this when they suggested that the strength of one's ties to convention was an indicator of

the magnitude of the costs associated with deviance. The broad social-learning perspective suggests that stress and deprivation in conventional settings may have both effects, increasing the incentives for deviance and reducing the costs of deviance. PIC-R has also suggested some important limiting conditions on the role of ties to convention: for example, some values may be particularly well served by deviance and not as well served by nondeviant behaviour; without a reduction in the density of rewards contingent upon deviance, the effect of strong ties to convention is weakened; and, ties to convention (as indicators of the potential costs of deviance) may be of most importance when ties to crime are of moderate strength (Principle Eight).

There are some circumstances under which participation in nondeviant activities may increase the chances of deviant acts occurring. Many conventional behaviours are subject to the label deviant when they occur at inappropriate times or in inappropriate situations. Sometimes it is a matter of inappropriate intensity or frequency. Passing cheques, using credit cards and "borrowing" money and property are activites with rather narrow and sometimes blurred conventional boundaries. Many forms of sexual and drug-related activities have more or less narrow conventional (nondeviant) limits. Low consensus forms of deviance have, by definition, boundaries which vary from social group to social group. A near-industry has been created for psychology in recent years through attempting to define and develop "appropriate" levels of assertiveness. Another recent example of the less than distinct boundaries of conventional conduct was the entry of governments into the traditional street-level "numbers racket". Finally, the heightened con-

cern over the sexual and physical abuse of children has underscored distinctions between discipline and abuse and between affective support and sexual activity. Generally, some forms of deviance may be attributed to inappropriate generalization or a failure of discrimination.

Political and Socio-cultural Systems

There has been an understandable and yet regrettable tendency in the social sciences to talk of a political economy of deviance versus socio-cultural perspectives versus individual perspectives. Following Burgess and Akers (1966), the PIC-R position that developed is: the immediate reward-cost contingencies influence individual behaviour but many of the factors which produce and maintain these contingencies are at the broader social and political levels. The term "contingencies" is used in its broadest sense to refer to the nature of the rewards and costs, the behavioural opportunities and resources and how the delivery of rewards and costs depends upon behaviour. Sometimes variations in contingencies may be described as structural inequalities in the distribution of resources and power.

10. Historical, geographic and political-economic factors primarily influence individual behaviour by way of the contingencies which they produce within settings and communities.

11. Setting and community factors include physical, environmental and cultural variables, as well as the structure of social systems; these influence individual behaviour through the reward-cost contingencies they maintain within the settings.

A political economy and history of the law, criminal justice and corrections is developing but the field awaits a sophisticated political economy of criminal behaviour. The writings of Taylor et al. (1973) provide an extended and very lively discussion of that need. At the present time, the classic works of the Chicago School continue to stand as the most direct examples of political factors in delinquency among the poor (see Martin, 1973). Similarly, the cross-cultural work of Field (1962) on drunkenness continues to be one of the few impressive empirical accounts of how political and economic factors may relate to family structure and how family structure in turn relates to drinking behaviour. What must also be noted is that many of the personality (Eysenck, 1977; Donovan & Jessor, 1978) and situational (Nettler, 1978) correlates of deviance are the same across groups and settings which are diverse in their structure and culture.

With the present level of knowledge regarding the importance of political-economic factors, it is difficult not to engage in dramatizations of the obvious: the "obvious", that is, when one's concern is with accounting for inter- and intra-individual variations in deviant behaviour. The obvious factors not to be dramatized include the following: social groups create deviance by the defining and enforcing of rules the violation of which constitutes deviance; cattle-rustling is more frequent in rural than urban centres; white-collar settings tend to produce white-collar crime while the "street" produces "street" crime; black market operations increase when valued goods are scarce and over-priced in the legitimate market.

Principle Twelve will develop the basic dimensions for the analysis of the contingencies within a system but some preliminary comments may be helpful.

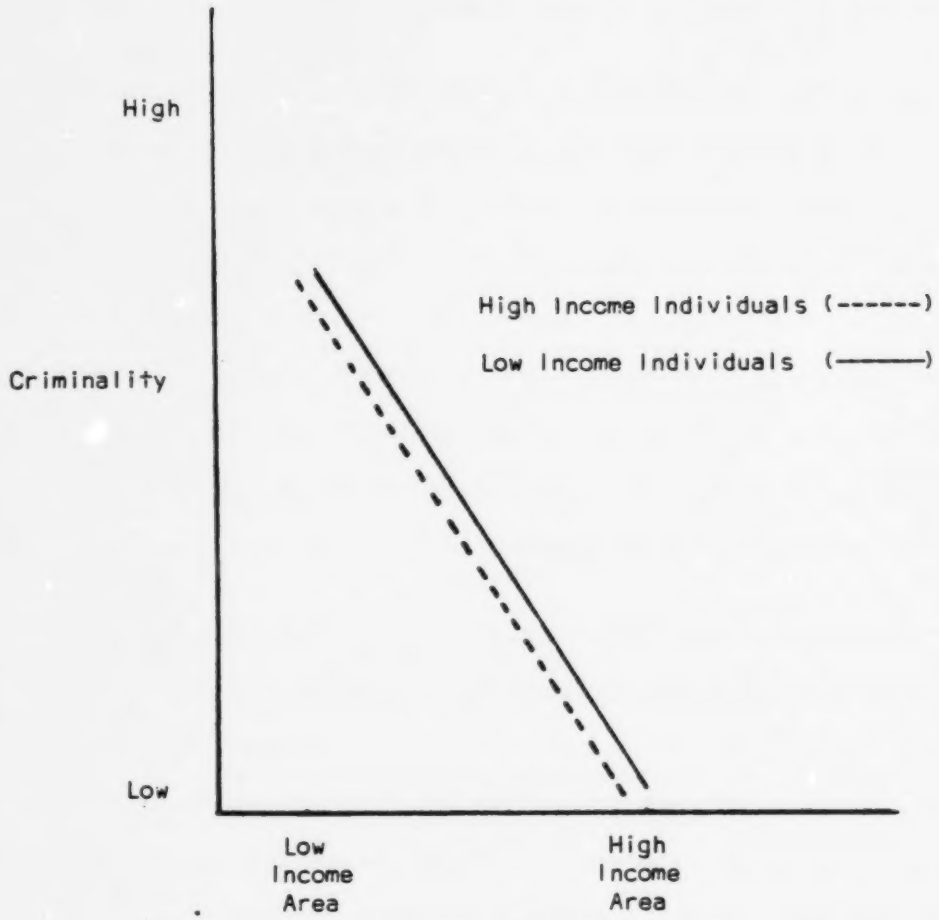
Principle Eleven is a key sociological principle as opposed to a social psychological principle. Ecological and socio-cultural factors influence individual behaviour only in so far as those factors influence the contingencies under which individual's behave. This is the behavioural version of Durkheim's "social fact".

Three major elements of the social structure of systems are membership composition, role composition, and status composition. The membership composition of a social system is a summary measure of the characteristics of individual members of the system. We have evidence of a membership composition effect when we can demonstrate, for example, that being a member of a group in which men outnumber women influences the behaviour of both males and females in the group. Such a demonstration requires that we also look at the behaviour of men and women in groups where the men are not dominant.

An example with social class (income level) is particularly relevant to the analysis of criminality. The empirical evidence regarding the effects of social class suggests that living in a lower class neighbourhood is a more important factor than one's own personal income (a common index of social class). The situation is illustrated on the next page.

The figure suggests that there is very little difference in the criminality of low and high income individuals but that living in a low income area is associated with relatively high criminality among both the low and high income individuals. Contingencies are in effect within low income neighbourhoods which influence the deviant behaviour of low and high income individuals. For example, there may be greater access to some of the resources necessary for crime.

Figure 6

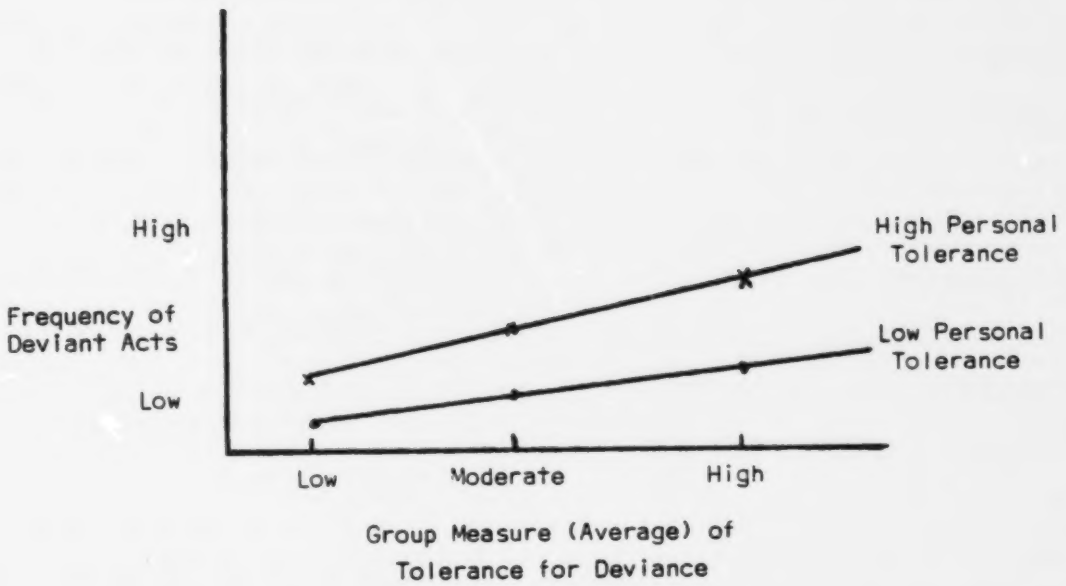

High
Criminality
Low
High Income Individuals (------)
Low Income Individuals (———)
Low Income Area
High Income Area

The effects of rules (personal and social) may be analysed in a similar way. Individuals have their own personal attitudes, values and beliefs (or rules) regarding the appropriateness of various behaviours. Systems or groups may be characterized in terms of the average normative position or the dominant normative position. Personal rules and social norms may both impact on the individual as the next figure illustrates.

The hypothetical representation suggests that tolerance for deviance has an effect both as an individual attribute and as a group attribute. Those with high personal tolerance for deviance are more likely to engage in deviant activity than are those less personally supportive of deviance no matter the group level of tolerance. At the same time, even those who are personally not supportive of deviance are more likely to engage in deviant activity when the group tolerance is high as opposed to when the group tolerance is low. As in the social class example, contingencies are in effect which influence the behaviour of all members of the community.

Persons occupy different positions within social systems and the concept of role refers to those sets of behaviours (inter-related operants) which anyone in a given position in a given social system would display. "Status" refers to the rights and obligations which go along with role behaviours. There may be large differences in the styles and preferences of fathers, but <u>anyone</u> in the "father role" is expected to behave in certain standard ways. Similarly, there are tremendous individual differences among probation officers but certain aspects of the role of "probation officer" are constants. The contingencies which apply may vary with roles, that is, with position in the system.

Figure 7


High
Frequency of
Deviant Acts
Low
High Personal
Tolerance
Low Personal
Tolerance
Low
Moderate
High
Group Measure (Average) of
Tolerance for Deviance

A major practical implication of Principle Eleven is that it may be difficult for a worker to establish and maintain some contingencies for clients. It may be more feasible to help the client secure a role within a social system where the natural contingencies are antideviant. Principle Twelve has to do with the major dimensions for analysing the controlling potential of any given setting or social system. Note that a comprehensive analysis would involve an examination of all systems of which the individual is a part.

12. Two basic dimensions for the analysis of the effects of systems on the deviant and nondeviant behaviours of its members are the normative and the control dimensions. The normative dimension includes behavioural prescriptions and proscriptions and their distribution according to one's position within the system. The control dimension includes the visibility of normative and deviant behaviour to persons who control resources (including potential rewards and costs); the quantity, variety, quality and magnitude of potential rewards and costs; the immediacy, frequency, and regularity with which rewards and costs are delivered; and, the maintenance of inter-connecting contingencies for deviant and nondeviant behaviour.

Principle Eleven suggested that an analysis of the membership, role and status composition of social systems might reveal evidence that certain contingencies were being maintained which encouraged (or discouraged) the occurrence of deviant behaviour among members or sets of members of a given social system. Principle Twelve applies the earlier individually-oriented principles of PIC-R to the analysis of social systems, and suggests two sets of questions regarding systems. One, what behaviours and goals are considered "appropriate"

or "good" versus "bad"? (Related is the question of whether the norms and values vary according to position in the system.) Two, what resources are available within the system, what rewards and costs are available for delivery, and is the delivery of the rewards and costs such that strong effects on behaviour will be found?

Consider the effects on deviant behaviour of membership in peer groups. The first question is whether the dominant normative position in the groups is pro or antideviant? (It may be neither, i.e., nonscriptive.) The earlier discussion of personal rules and social norms suggested that the average or dominant normative position of a group may influence the behaviour of its members and above and beyond the effects of one's personal beliefs. Principle Twelve suggests an additional question regarding the quality of the rewards that members of the group can deliver to each other. One solid indicator of the quality of rewards delivered in a group is a measure of how much members like and care for each other. When there is a relatively high degree of mutual liking and caring, expressions of approval and disapproval will be more effective than they would within groups characterized by hostility, mistrust or low levels of affective involvement.

Linden and Hackler (1973) have provided an important empirical analysis of the joint importance of group norms and quality of affective relationships. Their study also incorporated the idea that persons belong to more than one group. Delinquency rates were highest among youths who had strong affective ties to delinquent peers, in combination with weak affective ties to conventional others (parents). Delinquency rates were lowest among youths who had weak affective ties to delinquent peers, in combination with strong

affective ties to parents. Andrews (1980) provides several additional examples based on experimental investigations of counselling procedures in corrections. In brief, the empirical studies show that the quality of the interpersonal relationships within groups affects the amount of influence a group has on its members, but the deviant versus antideviant nature of the behavioural effects depends upon the deviant versus antideviant nature of the behaviours modeled and reinforced within the group.

The control dimension includes more than the socio-emotional factors which were emphasized in the preceding paragraphs. The frequent finding that peer groups have more effect than the family on the deviant behaviour of adolescents, is at least in part due to the fact that many forms of deviance are less visible to parents than to peers (Andrews & Kandel, 1979). An interesting family effect, which relates to the matter of visibility, is the finding of low rates of abusive drinking among members of families in which controlled drinking was practiced in the home (Hughes, 1971). Within Jewish families, alcohol consumption by the young is not proscribed, but rather guided by an explicit set of rules regarding the amount and style of consumption. Thus, drinking by the young is visible to the parents who have the opportunity to apply sanctions for abusive patterns of consumption, while modeling or demonstrating controlled consumption. Another common observation in the alcohol literature, is the fact of relatively high rates of alcoholism among the self-employed (Hunt & Azrin, 1973). Unlike the typical employment situation, the drinking of the self-employed is free to get out of control because a boss and fellow-employees are not present to detect the early signs and apply corrective sanctions. Finally, correctional practitioners are able to provide case studies of clients from families in which the parents were anticriminal

in their attitudes and behaviour, in which there was affection and support, and yet the affection and approval were offered independent of the client's behaviour.

Concluding Principles

13. Variations in the probability of occurrence of any given behaviour within each of the deviant and nondeviant classes of behaviour may be understood or produced by the application of the preceding principles to that specific behaviour.

Principle Thirteen is presented in recognition of the generality of the principles which have been reviewed.

The drawing of distinctions between deviant and nondeviant requires a reference to standards of conduct, standards of the actor and/or those of someone else. This is not to say that the definition of deviant behaviour is wildly relativistic. It is quite the contrary, according to some thoughtful reviews of the evidence regarding those forms of deviance which communities in different cultures consider most troubled or troublesome (Wellford, 1975).

14. The predictability of behaviour and its amenability to influence, increase with individualized assessment of the signalled reward/cost contingencies.

For emphasis, Principle Fourteen underscores an opening point, the rich variety in human experience and human values.

15. The human and social value of any perspective on human conduct is in some part a function of predictive efficiency and the ability to influence events. For

the most part its value is a function of ethical and humane applications.

THE DESIGN OF PREDICTIVE STUDIES

1. The normal principles of methodology, rules of evidence, and statistical analysis apply and the researcher will increase the credibility of his/her findings by documenting that controls were introduced for competing factors and that the introduction and ordering of predictors within the prediction formula followed a theoretically-derived plan.

2. The predictability of indices of deviant behaviour increases with the reliable and comprehensive assessment of the signalled reward/cost contingencies for deviant and nondeviant behaviour and with considerations of the potential interactions among indicators of the reward/cost contingencies.

3. Indicators of the rewards and costs for deviant and nondeviant behaviour may be of the self-report, observational, socio-historical or other types. The predictability of indices of deviant behaviour will increase with the use of a variety of methods of measurement of the predictors, at least insofar as the different approaches to measurement tap different sources of variance in the signalled rewards and costs.

   For example: Personal (self-reported) endorsement of criminal sentiments and socio-historical or observational indices of the criminal activity of a person's friends may be positively correlated but each may make some independent contributions to the predictability of criminal behaviour. The self-report measure will better reflect the personal source of control while the socio-

historical measure will better reflect the interpersonal source. Similarly, a self-report on the criminality of one's friends might make an additional independent contribution because anticipation of friends' reactions may contribute to the personally-mediated outcome events.

4. Indicators of the reward/cost contingencies may be represented on a contiuum from "fixed trait and historical" indices through "momentary state and situational" indices. While the more stable and the less stable or more dynamic measures may be correlated, the inclusion of both sets of predictors will increase the predictability of deviant behaviour.

Note: a) Over the period of time in which deviant behaviour is being predicted, the less stable measures may change and some of that change may be anticipated by the more stable measures.

b) When predicting over the very short term, the less stable measures will tend to be the best predictors but the more stable measures may still contribute as additional predictors and as moderator variables. (Variable A functions as a moderator variable when the relationship between B and Y depends upon the level of A.)

c) When the concern of a study is the identification of functional validity[3] (as opposed to cross-sectional or predictive validity), indices of the less stable type must be employed. Again, indicators of the more stable type might serve as additional predictors and as moderator variables but, by definition, they are less able to document that <u>changes</u> on A were associated with <u>changes</u> on Y".

d) In cross-sectional or postdictive studies, measures of past states and situations will be powerful. However, measures of current states and situations may inflate the proportion of variance accounted for by tapping effects rather than causal contributions. In other words, A may influence Y but Y may also influence A and cross-sectional studies take advantage of this.

5. If the results of a predictive study are to be of maximum value to clinicians and practitioners in the human and social services, then it is important that presentation of results allow an examination of the contributions of both fixed and dynamic measures. Presently, it appears to be the case in the prediction of criminal behaviour that the inclusion of a very few well-chosen fixed socio-historical indices and personality measures of the trait-type efficiently yields the maximum amount of variance to be accounted for. However, efficient prediction rarely is the primary concern of practitioners (or theorists). Rather, their concern is with those attributes of persons and their situations which are reasonably and ethically amenable to influence and whose influence would in turn be associated with variations in the chances of deviant activity. Knowing that ten dynamic factors accounted for 30 per cent of the variance in recidivism may be much more valuable in practice than knowing that five fixed-trait predictors accounted for the same or an even greater proportion of the variance.

For example: It is widely recognized that relatively low-risk and relatively high-risk probationers may be identified with some validity by considering factors such as age (young), sex (male), previous record, stability of prior employment and the criminal record of the biological father. Similarly, psychometric assessments of relatively fixed traits such as psychopathy,

neuroticism and inadequacy yield moderately valid predictions of future criminal activity. None of the factors just cited are reasonably amenable to influence. They are, however powerful and efficient predictors because they correlate with a number of other more dynamic attributes of persons and their situations which may be of functional and practical significance.

The tendency to report the results of predictive studies in terms of the minimum number of predictors required to maximize predictability is one with very serious implications. For example, "aging-out" is now being used as a policy rationale for long-term incarceration. Such fundamental misunderstandings of predictive attributes of persons and their situations must be challenged by systematic, empirical explorations of the functional significance of the dynamic correlates of factors such as age. Even survey-type research will be important here; for example, Henley and Adams (1973) showed how age-related variations in drug use patterns could be traced to important status changes such as getting married and becoming a parent.

6. Indicators of the rewards and costs in effect for deviant behaviour ("ties to deviance") include measures of:

   a) prior (and rewarded) involvement in deviant behaviour;

   b) possession of prerequisite skills for deviance;

   c) personal endorsement of sentiments supportive of deviance in general and the specific deviant act in particular;

   d) value placed on outcomes which are more readily obtained by deviant than by nondeviant behaviours;

   e) social support for deviance (including necessary resources, models, association with others involved in deviance, affective ties to such others).

7. Indicators of the rewards and costs in effect for nondeviant behaviour ("ties to convention") include measures of :

   a) prior (and rewarded) involvement with conventional behaviours;

   b) possession of prerequisite skills for normative or creative performance in conventional settings;

   c) personal endorsement of sentiments supportive of nondeviant behaviours;

   d) value placed upon outcomes which are more readily obtained by nondeviant than by deviant behaviour;

   d) social support for nondeviant behaviour (including necessary resources, models, association with nondeviant others, affective ties to such others).

   Note: There is a wide variety of nondeviant settings which might be sampled: home, school, work, church, neighbourhood, recreation, etc..

8. Assessments of ties to deviance and ties to convention will yield measures which are negatively correlated. The extent to which the measures make independent contributions in the prediction of deviant behaviour is a function of interconnecting contingencies (Principle Nine) and the interaction of density of rewards with density of costs (Principle Seven).

9. The predictive value of any given measure of personal sentiments (attitudes, values and beliefs) increases up to some level:

   a) with the clarity and specificity of the standards of conduct implied by the sentiment;

   b) with the personal relevance of the rewards and costs implied to be associated with conformity or deviance;

   c) when the standards of conduct implied by other sentiments are similar to the standard implied by the sentiment under consideration;

   d) with the degree of external (including social) support for conforming behaviour;

   e) with the individual's level of self-management skills (the ability to establish internal contingencies or actively arrange appropriate external contingencies);

f) with the individual's level of self-esteem (the ability to self-deliver high quality rewards and costs);

g) with the value placed upon self-management and upon a high degree of correspondence between beliefs and actions; and,

h) with histories or exposure to favourable reward and cost contingencies for conformity with standards of conduct (generally and with particular reference to that standard of conduct implied by the given sentiment).

Note: The assumption is that personal sentiments mediate self-instruction, self-reward and self-punishment (i.e. the personal source of controlling events). The parameters and limits of the above and next set of suggestions remain to be explored.

10. The predictive value of any given measure of the social support for a given behaviour increases up to some level:

a) with the personal endorsement of sentiments supportive of that behaviour;

b) with histories of exposure to favourable reward and cost contingencies for that behaviour;

c) with the individual's sensitivity to external cues (generally and in particular to the types of cues in a given setting or situation);

d) when other settings with which the person is associated support similar behaviour; and,

e) when the measure of social support samples the normative and control dimensions in a comprehensive meanner.

11. Self-esteem is one product of the extent to which one's conduct corresponds with one's standards or those of one's associates. Thus, the co-variation of self-esteem and deviance is a function of personal and social standards, tending to be positive in the presence of supports for deviance and negative in the absence of supports for deviance.

12. The negative co-variation of measures of personal and interpersonal skills

(for example, self-control, general competence) with measures of deviance is greatest when the personal and social supports for deviance are weak.

13. While generally applicable measures of the rewards and costs for deviant and nondeviant behaviour are useful in studies of inter-individual variation, the predictability of intra-individual variations will be increased through detailed behavioural analysis of prior instances of the deviant and nondeviant behaviours of the individuals concerned. The motives and costs for deviant and nondeviant behaviour can be highly idiosyncratic.

INTERVENTION

No matter what particular perspective on deviant conduct is being employed, intervention planning and implementation, operations and evaluations all must go on within the context of political, economic, ethical and human value considerations. For example, some forms of deviance no longer constitute troubled or troublesome behaviour when simple changes in group membership, location of the act, or personal sentiments occur.

1. Variations in the probability of occurrence of deviant behaviour may be achieved by producing and signalling a shift in the density of the rewards and the density of the costs for deviant and nondeviant behaviour. A shift which results in a reduced probability of deviant behaviour occurring may be produced by:

   a) reducing the signalled density of the rewards for deviant behaviour;

   b) increasing the signalled density of the costs for deviant behaviour;

   c) increasing the signalled density of the rewards for nondeviant behaviour;

d) reducing the signalled density of the costs for nondeviant behaviour; and,

e) by linking the contingencies for deviant and nondeviant behaviour such that shifts in the rewards and costs for nondeviant behaviour have maximum effects on the chances of deviant behaviour.

2. The automatic rewards for deviance are, once established, relatively immediate, reliable and resistant to influence. Beyond surveillance and response prevention (incapacitation) the possibilities for influence at the automatic level are relatively weak. Some drug therapies (such as methadone) and some counter-conditioning approaches do focus on the automatic level.

3. The personal and interpersonal sources of controlling events are more amenable to influence insofar as sentiments which are less supportive of deviance can be exposed under interpersonally-facilitative conditions; the practice of self-management skills can be encouraged; and decreased association with deviant others and increased association with nondeviant others can be arranged.

4. Since the maintenance and generalization of contingency changes will often be a problem, the most feasible approach is to motivate and assist the client in securing positions within settings and communities in which the contingencies maintained by structural-cultural factors are supportive of nondeviant behaviour and nonsupportive of deviant behaviour. Such efforts may require activities of the skill-development type plus advocate-broker activities in order for the client to gain entry into the systems.

5. When the rewards delivered by deviant behaviour are not deliverable by nondeviant behaviour (for example with some forms of sexual and aggressive offences), and when the deviance is intolerable to the community and the client, then efforts aimed at altering the motivational system of the client and/or the

opportunity for the deviant act become the more feasible alternatives. (See point two above.)

6. Ethical and effective intervention presupposes comprehensive and individualized assessment. Such assessments may reveal significant proportions of an agency's clients for whom the most effective strategy is radical nonintervention. When the probability of future problem behaviour is very low, when the density of the rewards for deviance is low and the density of the costs is high, any intervention risks producing shifts, shifts which can only be in the pro-deviant direction. It is the more "difficult" clients who need and may profit from agency efforts. The PIC-R principles having to do with "magnitude of effects" suggest that dramatic effects may be evident with intermediate-risk clients even with small shifts in contingencies. The highest-risk clients demand multi-faceted intervention.

7. The CaVIC reviews of the literature (Andrews, 1979 a, b), Gendreau and Ross (1979), Andrews & Kiessling (1980), Kiessling & Andrews (1980), Andrews (1980), and the proposal for the current Andrews & Kiessling (in progress) study all provide examples of the correctional applications of principles contained within PIC-R. Some outstanding examples include the works of Hunt & Azrin (1973), Azrin (1976) and Sobell & Sobell (1972) with alcoholics; the use of the principles of observational learning by Chandler (1973) and Sarason & Ganzer (1973); the system level interventions of Alexander & Parsons (1973) within the family; and the community-wide efforts with police services of Schnelle and associates (1975). The collections of Nietzel et al. (1977), and Franks and Wilson (annual) contain many examples of the application of social-learning principles to problems in the areas of mental health.

3. The systematic exploration and understanding of the efficacy of broad primary prevention programs is in its infancy relative to the more individually-oriented efforts (which are at the toddler stage). Within the context of criminology, no better guideline for primary prevention programs exists than Nettler's (1978, p. 338) conclusion based upon a review of the sociology of crime: "Whatever destroys community fosters an increase in predatory crimes." It remains to be seen how and when the fostering of community reduces troubled and troublesome behaviour and the extent to which it produces new forms of trouble.

FOOTNOTES

1. Respondent or classical conditioning refers to learning based on contingencies between stimuli. A given stimulus (the conditioned stimulus) may reliably signal the appearance of another stimulus (the unconditioned stimulus). Under such conditions, a conditioned response may come to be elicited by the conditioned stimulus. The conditioned response is typically some factor or component of the unconditioned response. The unconditioned response being the response elicited by the unconditioned stimulus. Respondent conditioning appears to be most important in the learning of emotional responses, most notable autonomic reactions such as heart-rate variations. More generally, it is another example of how stimulus events carry information.

2. Taken from "Me and Bobby McGee", Kris Kristofferson and Fred Foster, 1969. Combine Music Corporation, Nashville, Tennessee, U.S.A..

3. "Functional validity" refers to whether changes on measures are associated with changes in the behaviour of interest. Normally such validity information comes from experimental studies in which factors are deliberately manipulated under controlled conditions in order to observe the effects of the change introduced. "Cross-sectional validity" refers to differences found between persons known to differ in their histories or past actions. "Predictive validity" refers to the ability of a measure to forecast or predict behaviour.

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Appendix

The Principles

The Principles

1. Occurrences of deviant and nondeviant behaviour are under antecedent and consequent control.

2. Inter- and intra-individual variations in the probability of occurrence of a given class of behaviour (deviant or nondeviant) are due to variations in the signalled rewards and costs for that class of behaviour.

3. Antecedents and consequences are of two major types: additive events (stimuli are introduced, extended or augmented) and subtractive (stimuli are withdrawn, postponed or diminished).

4. The controlling properties of antecedents and consequences are acquired through the interaction of the person with the environment. The principles governing the acquisition, maintenance and modification of the controlling properties of stimulus conditions include those of genetic and constitutional disposition and capability; biophysical functioning; cognitive functioning; human development; behavioural repertoire; state conditions; and respondent and operant conditioning including observational learning, rule learning, symbolic control and role enactment.

5. Antecedents and consequences arise from four major sources: the actor (personally-mediated events); other persons (interpersonally-mediated events); the act itself (non-mediated, or automatic and habitual events); and other aspects of the situation of action.

6. Variations in the probability of occurrence of a given class of behaviour are a positive function of the signalled density of the rewards for that class of behaviour and a negative function of the signalled density of the costs for that class of behaviour.

7. The magnitude of the effect of any one signalled reward, for any class of behaviours, depends upon the signalled density of other rewards for that class of behaviours. Generally, the magnitude of the effect of any one reward is greatest at some intermediate level of density, and the magnitude of the effect of any one reward is diminished at the lowest and highest levels of density. Similarly, the magnitude of the effect of any one cost for any class of behaviours is greatest at some intermediate level of density of costs.

8. The magnitude of the effect of the signalled density of the costs for any class of behaviours depends upon the signalled density of the rewards for that class of behaviours. Generally, the effect of density of costs is greatest at some intermediate level of density of rewards and diminished at the lower and higher levels of density of rewards.

9. Variations in the signalled rewards and costs for one class of behaviour (deviant or nondeviant) may produce variations in the probability of occurrence of the other class of behaviours. The magnitude of the effect is a function of interconnecting contingencies and schedules for deviant and nondeviant behaviour. The rewards for nondeviant behaviour approach their maximum impact on the chances of deviant behaviour under the following conditions:

a) when and where relatively noncostly and nondeviant behaviours produce a relatively high density of rewards, including rewards similar to those produced by deviant behaviour;

b) when and where the costs for deviant behaviour include a reduction, postponement, omission or interuption in the delivery of those rewards produced by nondeviant behaviour; and,

c) when and where nondeviant behaviours are incompatible with deviant behaviour.

10. Historical, geographic and political-economic factors primarily influence individual behaviour by way of the contingencies which they produce within settings and communities.

11. Setting and community factors include physical, environmental and cultural variables, as well as the structure of social systems; these influence individual behaviour through the reward-cost contingencies they maintain within the settings.

12. Two basic dimensions for the analysis of the effects of systems on the deviant and nondeviant behaviours of its members are the normative and the control dimensions. The normative dimension includes behavioural prescriptions and proscriptions and their distribution according to one's position within the system. The control dimension includes the visibility of normative and deviant behaviour to persons who control resources (including potential rewards and costs); the quantity, variety, quality and magnitude of potential rewards and costs; the immediacy, frequency, and regularity with which rewards and costs are delivered; and, the maintenance of inter-connecting contingencies for deviant and nondeviant behaviour.

13. Variations in the probability of occurrence of any given behaviour within each of the deviant and nondeviant classes of behaviour may be understood or produced by the application of the preceding principles to that specific behaviour.

14. The predictability of behaviour and its amenability to influence, increase with individualized assessment of the signalled reward/cost contingencies.

15. The human and social value of any perspective on human conduct is in some part a function of predictive efficiency and the ability to influence events. For the most part, its value is a function of ethical and humane applications.